

# Notice of Allowability

Application No.

10/689,395

Examiner

Leon J. Harper

Applicant(s)

OMORI, SATOSHI

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 4/27/2007.
2. ☒ The allowed claim(s) is/are 14, 19 (renumbered as 1 and 2).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material         | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

### **DETAILED ACTION**

1. This communication is in response to the amendment filed 4/27/2007. After a thorough search and examination of the present application and in light of the prior art made of record, claims 14,19 are allowed. Claims 1-13, 15-18, 20-26 have been cancelled.

### **Reason for Allowance**

2. The prior art made of record does not teach or fairly suggest a sequencer for reading sequence information on said biological compounds; dividing means for dividing one of text data representing a sequence of said biological compounds and numerical data obtained by converting said text data utilizing a conversion rule, into a plurality of m-bit partial data arranged in a plurality of columns in an arranged direction corresponding to a direction along which said biological compounds are placed, and in a plurality of rows in a non-arranged direction which crosses said arranged direction, where m is an integer greater than or equal to 16; computing means for computing a first set of parity information by applying a first operation of a Galois field  $GF(2^m)$  along said non-arranged direction to a set of said partial data of each column and computing a second set of parity information by applying a second operation of a Galois field  $GF(2^m)$  along said arranged direction to a set of said partial data of each row; and recording means for recording said first and second sets of parity information in a recording medium, wherein: when  $\alpha$  is a primitive element of a Galois field  $GF(2^m)$ , said first set

Art Unit: 2166

of parity information includes a sum of a plurality of products obtained by multiplying a set of said partial data of each column along said non-arranged direction by  $\alpha^{(sp)}$ ,  $\alpha^{s(p+1)}$ ,  $\alpha^{s(p+2)}$ , ...  $\alpha^{s(p+d_p)}$ , where  $s$  and  $p$  are nonnegative integers and  $d_p$  is an integer greater than or equal to one; and said second set of parity information includes a sum of a plurality of products obtained by multiplying a set of said partial data of each row along said arranged direction by  $\alpha^{(tq)}$ ,  $\alpha^{t(q+1)}$ ,  $\alpha^{t(q+2)}$ , ...  $\alpha^{t(q+d_q)}$ , where  $t$  and  $q$  are nonnegative integers and  $d_q$  is an integer greater than or equal to one.

### Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon J. Harper whose telephone number is 571-272-0759. The examiner can normally be reached on 7:30AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*LJH*  
*Leon J. Harper*  
*July 19, 2007*

  
**HOSAIN ALAM**  
**SUPERVISORY PATENT EXAMINER**